



December 13, 1995

Service Request No.: K9507421

Jeff Randall
CH2M Hill
777 108th Ave. NE
Bellevue, WA 98004

Re: Longview Fibre/Project #117627.A0.ZZ

Dear Jeff:

Enclosed are the results of the sample(s) submitted to our laboratory on November 29, 1995. For your reference, these analyses have been assigned our service request number K9507421.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 239.

Respectfully submitted,

Columbia Analytical Services, Inc.

A handwritten signature in black ink, appearing to read "Howard Boofse", is written over the typed name.

Howard Boofse
Project Chemist

HB/td

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COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
J	Estimated concentration. The value is less than the method reporting limit, but greater than the method detection limit.
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: CH2M Hill Corporation
Project: Longview Fibre/#117627.A0.ZZ
Sample Matrix: Water

Service Request: K9507421
Date Collected: 11/28/95
Date Received: 11/29/95
Date Extracted: NA

Aromatic Volatile Organic Compounds
EPA Methods 5030A/8020
Units: µg/L (ppb)

Sample Name:	LF-MW-2	LF-MW-3	Trip Blank
Lab Code:	K9507421-001	K9507421-002	K9507421-003
Date Analyzed:	12/1/95	12/1/95	11/30/95

Analyte	MRL			
Benzene	0.5	ND	ND	ND
Toluene	1	ND	ND	ND
Chlorobenzene	0.5	ND	ND	ND
Ethylbenzene	1	ND	ND	ND
m-,p-Xylenes	1	ND	ND	ND
o-Xylene	0.5	ND	ND	ND
1,3-Dichlorobenzene	1	ND	ND	ND
1,4-Dichlorobenzene	1	ND	ND	ND
1,2-Dichlorobenzene	1	ND	<3(a)	ND

a The MRL is elevated because of matrix interferences.

Approved By: 

Date: 12-13-95

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: CH2M Hill Corporation
Project: Longview Fibre/#117627.A0.ZZ
Sample Matrix: Water

Service Request: K9507421
Date Collected: 11/28/95
Date Received: 11/29/95
Date Extracted: NA

Aromatic Volatile Organic Compounds
EPA Methods 5030A/8020
Units: µg/L (ppb)

Sample Name: Method Blank
Lab Code: K951130-MB
Date Analyzed: 11/30/95

Analyte	MRL	
Benzene	0.5	ND
Toluene	1	ND
Chlorobenzene	0.5	ND
Ethylbenzene	1	ND
m-,p-Xylenes	1	ND
o-Xylene	0.5	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND

Approved By: 

Date: 12-13-95

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: CH2M Hill Corporation
Project: Longview Fibre/#117627.A0.ZZ
Sample Matrix: Water

Service Request: K9507421
Date Collected: 11/28/95
Date Received: 11/29/95
Date Extracted: 12/4/95
Date Analyzed: 12/4,5/95

Total Petroleum Hydrocarbon as Diesel and Oil
Washington DOE Method WTPH-D
Units: µg/L (ppb)

Analyte:	Diesel	Oil*
Method Reporting Limit:	250	750

Sample Name	Lab Code		
LF-MW-2	K9507421-001	ND	ND
LF-MW-3	K9507421-002	23500	1880
Method Blank	K951204-MB	ND	ND

* Quantified using 30 weight motor oil as a standard.

Approved By: _____

Date: 12-13-95

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K9507421.XLS - TPHw 12/13/95

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APPENDIX A
LABORATORY QC RESULTS

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill Corporation
Project: Longview Fibre/#117627.A0.ZZ
Sample Matrix: Water

Service Request: K9507421
Date Collected: 11/28/95
Date Received: 11/29/95
Date Extracted: NA
Date Analyzed: 11/30,12/1/95

Surrogate Recovery Summary
Aromatic Volatile Organic Compounds
EPA Methods 5030A/8020

Sample Name	Lab Code	Percent Recovery 4-Bromofluorobenzene
LF-MW-2	K9507421-001	90
LF-MW-3	K9507421-002	93
Trip Blank	K9507421-003	90
Method Blank	K951130-MB	84

CAS Acceptance Limits: 69-114

Approved By: 

Date: 12-13-95

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill Corporation
Project: Longview Fibre/#117627.A0.ZZ
Sample Matrix: Water

Service Request: K9507421
Date Collected: 11/28/95
Date Received: 11/29/95
Date Extracted: 12/4/95
Date Analyzed: 12/4,5/95

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D

Sample Name	Lab Code	Percent Recovery o-Terphenyl
LF-MW-2	K9507421-001	80
LF-MW-3	K9507421-002	77
Method Blank	K951204-MB	82

CAS Acceptance Limits: 59-110

Approved By: 

Date: 12-13-95

CHAIN OF CUSTODY RECORD AND AGREEMENT TO PERFORM SERVICES

CH2M Hill Project # 117627 A02Z Purchase Order # 147539										LAB TEST CODES										SHADED AREA- FOR LAB USE ONLY																			
Project Name Longview Fibre										# OF CONTAINERS											Lab 1 # K95-7421					Lab 2 #													
Company Name/CH2M Hill Office CH2M Hill Seattle																					Quote #					Kit Request #													
Project Manager & Phone # (206) 453-5000 Report Copy to: Mr. [] Jeff Randall Ms. [] Jeff Randall Dr. []																					Project #																		
Requested Completion Date: As per contract					Sampling Requirements SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>						Sample Disposal: Dispose <input checked="" type="checkbox"/> Return <input type="checkbox"/>															No. of Samples					Page of								
																										LogIn					LIMS Ver								
Sampling Date		Time		Type		Matrix		CLIENT SAMPLE ID (9 CHARACTERS)																REMARKS					LAB 1 ID					LAB 2 ID					
11/28/05		0500		XX				LF-MW-2						4		X		X												3 VOAS 11 Ag									
11/28/05		1200		XX				LF-MW-3						4		X		X												3 VOAS 11 Ag									
				XX				TRIP Blank						2		X														TRIP Blank									
Sampled By & Title (Please sign and print name) Doug Kunkel Doug Kunkel NY03										Date/Time 11/28/95 1230		Relinquished By (Please sign and print name) Douglas Kunkel Douglas Kunkel										Date/Time 11/28/95		QC Level: 1 2 3 Other: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>															
Received By (Please sign and print name) Lori K. Ham Lori K. Ham										Date/Time 11/29/95 1030		Relinquished By (Please sign and print name)										Date/Time																	
Received By (Please sign and print name)										Date/Time		Relinquished By (Please sign and print name)										Date/Time																	
Received By (Please sign and print name)										Date/Time		Shipped Via UPS BUS Fed-Ex Hand <input checked="" type="radio"/> Other <input type="radio"/> Client Shipped										Shipping #																	
Work Authorized By (Please sign and print name) Doug Kunkel Doug Kunkel 11/28/95										Remarks BTEX 8020 chlorobenzene 1,2 dichlorobenzene 1,3 dichlorobenzene 1,4 dichlorobenzene in VOAS																													